

WHAT IS CLAIMED IS:

1. An uncooled optical communication module comprising:

a plate-shaped thermistor having a positive temperature coefficient so that
 5 resistance of the thermistor increases according to an increase of an environmental temperature;

a semiconductor chip mounted on an upper surface of the thermistor; and,

a driving means for applying a predetermined voltage to the thermistor.

10 2. The uncooled optical communication module as claimed in claim 1, wherein the thermistor has a heating characteristic defined by an equation,

$$P = \frac{V^2}{R}, \text{ wherein } P \text{ represents a power consumption amount corresponding to a}$$

heating value of the thermistor, V represents a voltage applied to the thermistor, and R represents a resistance of the thermistor.

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3. The uncooled optical communication module as claimed in claim 1, wherein the driving mean includes:

a first electrode and a second electrode laminated on both sides of the thermistor;

and

20 a voltage source connected to the first electrode and the second electrode, which applies a predetermined voltage.

4. The uncooled optical communication module as claimed in claim 1, wherein the semiconductor chip is a semiconductor laser chip emitting light through one end of the semiconductor chip.

5 5. An optical communication module comprising:

a thermistor having a positive temperature coefficient so that resistance of the thermistor increases according to an increase of an environmental temperature;

a semiconductor chip thermally coupled to the thermistor; and,

a plurality of electrodes, coupled to the thermistor, arranged to connect a voltage
10 source to the thermistor.

6. The optical communication module as claimed in claim 5, wherein the thermistor has a heating characteristic defined by an equation,

$$P = \frac{V^2}{R}, \text{ wherein } P \text{ represents a power consumption amount corresponding to a}$$

15 heating value of the thermistor, V represents a voltage applied to the thermistor, and R represents a resistance of the thermistor.

7. The optical communication module as claimed in claim 5, wherein a voltage source is connected to the first electrode and the second electrode, which applies a
20 predetermined voltage to the thermistor.

8. The optical communication module as claimed in claim 5, wherein the semiconductor chip is a semiconductor laser chip emitting light through one end of the semiconductor chip.

5 9. The optical communication module as claimed in claim 5, wherein the semiconductor chip is a semiconductor optical amplifier.